In the Claims

Please amend claim 1 to read as follows.

1. (Amended) A device for detecting or quantitating one or more of a plurality of different polynucleotide sequences in a liquid sample, said device comprising

a substrate defining a sample-distribution network having (i) a sample inlet, (ii) two or more detection chambers, and (iii) channel means providing a dead-end fluid connection between each of said chambers and said inlet, wherein at least two of said detection chambers each contain a different, sequence-specific polynucleotide binding polymer for detecting or quantitating different polynucleotide sequences that may be present in such sample, to produce a detectable signal,

wherein said substrate comprises two or more laminated layers,

whereby evacuation of said network, followed by application of such sample to said inlet, is effective to draw sample by vacuum into each of said chambers.

REMARKS

Reconsideration of the application is respectfully requested. By this amendment, claim 1 (the only claim) has been amended. Also, the disclosure has been amended to correct certain typographical errors noted by the Examiner. In particular, page 11 at line 14 has been amended to refer to the vacuum port means 40a that is shown in Fig. 2A.

With reference to amended claim 1, support for at least two of said detection chambers each contain a different, sequence-specific polynucleotide binding polymer for detecting or quantitating different polynucleotide sequences can be found in original claim 9, for example. Support for wherein said substrate comprises two or more laminated layers can be found at page 22, line 5 et seq and the figures. No new matter is added by any of the inventions.

A terminal disclaimer is disclosed to obviate the obviousness type double patenting rejection. The applicant submits that the remaining rejections under 35 USC 101 and under 35 USC 102(b)) are moot in light of the amendments to claim 1.

Respectfully submitted,

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Appendix Showing Markup of Changes

(underlining indicates new text, brackets enclose deleted text)

The paragraph at page 1 lines 12-17 is amended to read as follows

This application is a continuation of Ser. No. 09/012,045 filed January 22, 1998, now Patent No. 6,124,138, which is a division of Ser. No. 08/831,983 filed April 2, 1997, now Patent No. 6,126,899, which claims the benefit of priority of U.S. Provisional Application Ser. No. 60/014,712 filed April 3, 1996, all of which are incorporated herein by reference.

The paragraph at page 6 lines 24-30 is amended to read as follows:

In another embodiment, the analyte-specific reagents in each detection chamber include an antibody specific for a selected analyte-antigen. In a related embodiment, when the analyte is an antibody, the analyte-specific detection reagents include an antigen [antiben] for reacting with a selected analyte antibody which may be present in the sample.

The paragraph at page 11 lines 8-23 is amended to read as follows:

As noted in the Summary of the Invention, the sample-distribution network of the invention may utilize any of a number of different channel configurations, or channel means, for delivering sample to the individual detection chambers. With reference to Fig. 2A, distribution network 34a includes sample inlet 38a, vacuum port means 40a, a plurality of detection chambers 44a, and channel means comprising a single channel 46a to which the detection chambers are each connected by dead-end fluid connections 48a. The detection chambers are distributed on either side of channel 44a, with the fluid connections branching off in pairs from opposite sides of the channel. Fig. 2B shows a portion of an alternative network 34b having an inlet 38b and detection chambers 44B, wherein fluid connections 48b branch off from channel 46b in a staggered manner.

The paragraph at page 13 lines 1-11 is amended to read as follows:

Figs. 3A-3B [3A-3A] illustrate the filling process for a sample-distribution network 34 in accordance with Fig. 2A. The network includes sample inlet 38, detection chambers 44, and sample delivery channel 46 which is connected to the various detection chambers by dead-end fluid connections 48. The network further includes a vacuum reservoir 40 at the

terminus of the delivery channel. A plurality of the detection chambers 44 contain dried detection reagents for detecting a different selected analyte in each chamber, with one or more chambers optionally being reserved as controls.--

1. (Amended) A device for detecting or quantitating one or more of a plurality of different polynucleotide sequences [analytes] in a liquid sample, said device comprising

a substrate defining a sample-distribution network having (i) a sample inlet, (ii) two [one] or more detection chambers, and (iii) channel means providing a dead-end fluid connection between each of said chambers and said inlet, wherein at least two of said detection chambers each contain a different, sequence-specific polynucleotide binding polymer for detecting or quantitating different polynucleotide sequences [each of said chambers includes an analyte-specific reagent effective to react with a selected analyte] that may be present in such sample, to produce a detectable signal,

[said substrate providing, for each chamber, detection means for detecting such signal,]

wherein said substrate comprises two or more laminated layers,

whereby evacuation of said network, followed by application of such [the] sample to said inlet, is effective to draw sample by vacuum into each of said chambers.